REMARKS/ARGUMENTS

Response to Restriction

In the restriction requirement, the claims have been divided into a group of article claims (Group I, claims 1-6) and a group of process claims (Group II, claims 7-14). Applicant affirms the earlier election to prosecute Group II, Claims 7 – 14.

Regarding the Amendments

The amendments to Claim 7 at lines 3 and 4 are to clarify the nature of the sheet material that is adhered to the molded plastic substrate in the first molding step. This adds no new matter, being based on the disclosure in Claim 12, as originally filed.

The amendments to Claim 7, steps (b) and (c) at lines 4 - 5 and lines 8 - 9 (as rewritten) are merely editorial in nature to clarify that the sheet material surface piece applied to the plastic substrate piece in the first step receives a molded-on edge covering in the second molding step that does not cover the whole of the sheet material surface layer and at least a portion of the sheet material provides a surface area on the molded article.

A minor punctuation correction has been made inserting a semicolon (;) in Claim 7, line 5.

Claim 12 is amended to provide the proper expression of the Markush Group listed in Claim 12, as suggested by the Examiner.

Added Claim 15 is based on the disclosure in the application as filed at page 9, lines 21 - 25 in the application as filed and therefore adds no new matter.

Added Claim 16 is based on the disclosure in the application as filed at page 9, lines 11 – 18 in the application as filed and therefore adds no new matter.

Regarding the Invention and the Objection and Grounds for Rejection

The objection to Claim 12 based on the Markush Group wording is believed to be removed by the amendment mentioned above, as suggested by the Examiner.

Claims 7 through 11 are rejected under 35 USC 102(b) as being anticipated by USP 5,034,173 to Altman et al. ("Altman"). As can be seen in a detailed review of Altman, it is essentially a two-step process for providing fiberglass parts. The disclosed reaction

injection molding process provides a door panel structure for an automobile using two steps to first coat the glass edges and an embedded metal frame with a heavy, viscous plastic resin and then impregnate the woven glass fiber mat with a second, thinner resin. In Altman's first molding step a metal tube and glass fiber mat cut to the general shape of the door panel are placed in the mold. A first, more viscous resin is injected and flows around and through the open mold edges along the tube and around the opening at the outer edges of the mat. In this step the tube is coated with a plastic profile and the viscous resin fills in around and impregnates only a short distance into the ***edge area*** of the glass fiber mat. See col. 3, line 60 through col. 4, line 26 and Fig. 3 which shows this first molded plastic component as being the speckled component. As can be seen, in Altman's first molding step, the first molded component overlaps only the sheet material edges and a relatively small area of the sheet material surface area adjacent the edges and does not provide a substrate molded part with the sheet material adhered to the surface. The first resin covers the sheet material edge and provides a smooth, paintable "finish" surface over the metal tube on the upper window frame and around the exposed peripheral mat edges. The first molded component is clearly not a substrate molded platic component but is instead an edge-covering and framing component.

Then, in Altman's second molding step, the mold is filled with the second resin component and the complete woven fiber mat (which would include both of the surfaces) is thoroughly impregnated and covered with a second, less viscous resin that penetrates throughout the sheet, cures and forms a rigid "fiberglass" panel below the window opening. See col. 4, lines 55 through 65 and Figs. 4 and 6 where the second molding resin component 66 is shown to be fully impregnating the glass sheet. Therefore, although the unattractive glass fiber mat sheet structure may be visible, it is thoroughly impregnated with and coated by the resin and the sheet material does not provide any actual surface area in the finished molded part. In the finished automobile door, a metal panel is attached that covers the surface of the second molded resin.

In Applicants' very different process according to Claims 7 – 11, in the first molding step, the precut sheet material is put into to a mold, a substrate component is molded behind and onto the back of the precut sheet material. The sheet material is adhered to the surface of the substrate piece to provide a desirable, aesthetically pleasing surface area but has exposed edges. This is also particularly highlighted in Claim 8 where the substrate piece is

continuous (i.e., not an open frame structure) and in the new Claim 15 where the first molding step provides a molded substrate completely covering the back of the sheet material. Then, the edge covering component is molded on second. As emphasized by the amendment in Claim 7, the molded article then has a surface area provided by the sheet material, i.e., the front of the sheet material surface side that is not covered nor impregnated by the molded plastic from either the first or second molding steps. This is completely different than the molded door frame of Altman where the edges of the fiber mat are over-molded first and a second resin is molded onto and incorporated into the fiber mat and is desired to completely penetrate and impregnate the mat before curing into a hard, fiberglass composite.

Regarding Applicant's claimed use of the specified semi-rigid sheet material laminate structure in Claim 10, this is not taught or in any way suggested by Altman's use of non-woven glass fiber matting at col. 4, lines 4 to 26, or anywhere else in Altman. The U-750 glass fiber sheet supplied by CertainTeed is described in more detail in USP 5,501,832 at col. 3, lines, 11 – 22. This material is a mat of glass strands held together by a polyester resin binder. From the cited section of Altman, it is not clear whether there are four layers of glass fibers bound together in the mat sheet or Altman used four sheets of the mat material. In either case, however, this does not teach Applicants' specified sheet material laminate having an adhesive layer sandwiched between the sheet material and a protective backing layer which bonds or otherwise adheres to the substrate plastic and protects the adhesive layer during the molding step.

Regarding Applicants' claimed use of a flow leader cavity in Claim 11, it is used in the second molding step and is not taught or suggested by Altman. In Altman, in the **first** molding step, the viscous resin flows through and fills up the open edge areas of the cavity. In the second step a less viscous, penetrating resin is used because there remains little or no room to flow through the mold. There is clearly no flow leader cavity shown or suggested for Altman's second molding step, which does not overmold the surface material edge in any event.

It can thus be seen that the Altman molding process bears little or no resemblance to Applicants' claimed process and therefore clearly does not teach or suggest the process of

Claim 7, nor any of the processes of any of the additional embodiments as set forth in the dependent claims 8 through 11.

Claims 12 through 14 are rejected under 35 USC 103(a) as being unpatentable over Altman in view of USP 6,753,057 to Gardner ("Gardner"). As can be seen on a detailed review of Gardner, this document teaches how to provide an exit opening for automobile airbag deployment in composite, layered automotive interior panels. It is directed particularly to making a tear seam an interior layer that is and stays invisible from viewing underneath the exterior panel surface. It is the Examiner's position that (a) Applicants' specified laminate structure surface sheet material is taught from Altman's fiberglass process and (b) Applicants' specified surface layer of thin, semi-rigid metal, wood or wood-based paper product sheet material is taught from Gardener at col. 18, lines 22 – 23 and that it is somehow obvious to exchange such materials with Altman's non-woven glass mat.

As discussed above, Applicants' sheet material structure (surface material layer – adhesive layer – protective layer) is clearly not taught or suggested in Altman. Moreover, upon review of the cited section in Gardner, it can be seen that the materials shown there are not being used for a thin layer on the surface of the panel but are instead used for the "rigid substrate" that provides the structural support (22) at the interior or back side of the automotive panel. See Figs. 2, 3 and 4. Therefore, it is clearly not remotely suggested or obvious to make any exchange or combination of the non-woven glass mats used in Altmans fiber glass process with the thick structural substrate materials of Gardner to provide an aesthetic, thin, semi-rigid metal, wood or wood-based paper product surface layer using a sandwich structure surface material sheet to obtain molded-on surface layer on a molded plastic part.

Regarding Claim 13, it can be seen that the polyamide adhesive layer of Applicants; laminate sheet material is not taught or suggested by Gardner. In Gardner an "elongated structure," which is in the form of a tape, strip, string or twine and can be a polyamide, is used to create the tearable seam location in the interior layer of the automotive interior panel. At col. 10, lines 7 – 11 of Gardner it is taught that the purpose of the elongated structure is to be **less adhesive** than the bond between the layers and provide a place for the layers to tear apart. This cannot in any way be seen to suggest use of a polyamide adhesive for Applicants' surface material layer.

Claims 7 through 14 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claim 1 of USP 6,926,856 (the '856 Patent). Although the two processes can use similar edge overmolding techniques, it is clear that the processes of Claim 7 (as amended) and Claim 12, specifying a surface material layer of metal, wood or wood-based paper products, are patentably distinct over and do not encompass the subject matter of the claims of the '856 Patent, which specify that the surface material is a fabric, as is defined therein.

As can be seen included in the Supplemental Information Disclosure Statement submitted herewith, the search results in different cases included prior art that appeared relevant to the claimed subject matter of the present application. In particular, attention is directed to U.S. Patents 6,165,404 and 6,447,706 to Savonuzzi ("Savonuzzi") and to an article in the journal Kunststoffberater (Plastic Advisor) from October 1999 by M. Knoblauch et al, entitled "Umspritzen Schafft Den Durchbruch", (Vol. 40, Pages 40-41) and to a translation obtained by Applicants ("Knoblauch Article").

In Savonuzzi it is taught that molded plastic panels can be prepared with surface areas from generally flexible covering layers by making a rigid preform with a backing or shielding layer and the desired covering layer, and then molding the plastic panel onto to the back of the preform. In the Knoblauch Article it is noted that plastic parts can be provided with sheet material, synthetic leather or film surface areas in a molding process of a type that is generally similar to some embodiments of the claimed invention. Neither reference, however, speaks to the use of semi-rigid sheet materials such as metal, wood or the like and particularly not to the sheet material laminate structures that are needed to employ these as surface materials.

These differences are clearly novel and inventive in view of the processes that are taught or suggested in the prior art. Therefore, it is believed that the present claims are currently in condition for allowance and their prompt allowance is courteously requested.

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